DESIGN GUIDELINES FOR THE MONORAIL CORRIDOR

I. Guideway and Related Elements

A. Guideway

1. *Design the guideway as an elegant, graceful and timeless system of integrated elements that express the civic nature of the monorail.*
   - Design the guideway, piers, emergency walkways, rails, raceways and other components as a comprehensive, well-considered and related family of elements.
   - Integrate any elements that need to be attached to the guideway and piers, using all elements to contribute to a consistent design.
   - Let the design reflect the physical forces of nature and the strength and crafting of the materials used.
   - Create a design that is equal to the position of the Monorail as a regional landmark and that contributes to the function of the city and the identity of Seattle.

2. *Balance civic-scale of the system elements with the scale and proportion of the specific existing city fabric and topography along the corridor.*
   - Design the guideway and system elements to be compatible in scale with areas that have a fine-grained urban fabric and pedestrian-scale environment.
   - Protect views where possible, and maximize the opportunities to enhance vistas.
   - Pay special attention to design details and scale in those areas with historic or culturally significant context.

3. *Integrate the guideway into its context, minimizing visual impacts in the urban fabric, and taking advantage of the opportunities of each setting along the corridor.*
   - Provide a balance between the desire for a flat or gradual guideway profile and a guideway that responds to the topography and urban form of the city along its length.
   - Where curves are required, minimize the visual impacts of crossing streets.
   - Minimize bents and other special structures. Where bents are required, locate and design them to function as corridor or gateway-defining elements, responding to the scale and character of their context.
   - Transitions in guideway alignment, structure type, elevation and pier placement should be uniform, resulting in a visually appealing and consistent structure as viewed from adjoining neighborhoods and along the corridor.
   - To the extent possible, avoid transitions from one side of the street to the other. Where they are necessary, locate transitions where curves in the streets facilitate transition. Do not locate transitions at intersection.

4. *Make the Monorail system a positive addition to the streetscape through attention to scale, proportion and detailing of the system elements.*
   - Design the guideway and piers to respond to the function of the street and the character of the pedestrian environment.
   - Provide as consistent a pattern as possible with the system elements, coordinating with the pattern of intersections, streetlights and trees that give continuity to the streetscape. In detailed

location decisions, consider the location of system elements in coordination with building entrances, sidewalks, vehicular movements, property access, bus stop locations and bus shelters, on-street parking location, landscape element, lighting, signage, and other street furnishings.
- In areas where property has yet to develop, locate support structures with the least impact possible for future development.
- Piers and other support structures should meet the ground plane in a clean and clear fashion, highlighting the expression of the structural function and material characteristics of the element.
- Express the footprint of the supporting structures as an integral part of the detailing in the surrounding paving.
- In areas where pedestrians are in proximity to piers and other elements, increase the level of attention to detail in materials, level of craftsmanship and texture.

5. *Use a palette of high quality, durable materials for system elements appropriate to their function and their context.*
   - Choose materials and finishes that will retain an attractive character over time by weathering well. Anticipate weathering characteristics and of the material so that the passage of time will improve, rather than mar the character of the guideway elements.
   - Use Life Cycle Assessment data as part of the materials selection process.
   - Use local materials whenever possible.
   - Use low toxicity materials and minimize finish coatings where possible.

B. Pier Location and Design

1. *Create a consistent rhythm through pier location and design, balancing systemwide design objectives with responsiveness to local conditions.*
   - Locate the piers in a consistent manner, providing for visual legibility and safety.
   - Address the impact and scale of the piers, particularly on narrower streets and finer-grained street environments.

2. *Minimize impact to valued views and spaces*
   - Locate piers to minimize the effect on important view corridors
   - Locate piers respectfully in regard to adjacent buildings and open spaces

3. *Utilize details that enhance context and character*
   - Give particular design attention to piers that are in proximity to pedestrians.
   - Express the footprint of the supporting structures as an integral part of the detailing in the surrounding paving.
   - Recognizing that there will be impacts on pedestrian space when increased guideway height or offsets translates to larger piers, make trade-offs that best support neighborhood values and needs.
   - Emphasize human scale features, materials, textures and details in areas where pedestrians come into contact with system elements

C. Switches

1. *Design and locate switching structures to cause the least impact to adjacent uses and neighborhood character*
   - Locate switches to minimize impact on the surrounding area, and make every effort to locate them outside of downtown, neighborhood centers or residential areas.
   - Ensure that switches do not result in dark or undesirable spaces underneath them, detailing the underside as necessary with lighting, design treatments, or artwork to create safe and pleasant spaces.
   - Where switches are located close to stations, provide continuity of design between the station and switches through a similar architectural expression or detailing.
   - Seize opportunities to create amenities out of street level spaces created by switches, such as overhead weather protection, areas for portable vendors, future retail uses.

D. Operation Center(s)

1. *Design the operation center(s) to fit in the context it is sited, expressing the functions within in a manner that is also sensitive to adjacent uses.*
   - Articulate the function of the facility through its architecture, using materials and forms that are industrial in nature.
   - Draw upon the order and pattern of the trainyard as inspiration for creating a visually pleasing and organized open space, especially as it is viewed from adjacent properties, streets, or slopes.
   - Provide screening for utility areas.
   - Use landscaping to highlight entrances or other places where the public is welcome.
   - Ensure that yard lighting, noise, and dust do not impact adjacent uses.

E. Other System Elements

1. *Incorporate all elements of the Monorail system into the local context, without detracting from the character of the setting.*
   - Provide screening of ancillary structures, where appropriate, either through attractive fencing or landscaping, in order to contribute to an attractive streetscape.
   - Locate and screen any other accessory buildings or structures to be compatible with the localized context.

II. Access and Circulation Near the Guideway

A. Vehicular

1. *Ensure a safe environment*
   - Locate piers to allow emergency access.
   - Locate piers so that a safe environment is maintained for vehicles, pedestrians and bicycles.
   - Address sight line clearances, especially at driveways and intersections.
   - Protect vehicles from piers and vice versa.

2. *Allow for necessary vehicular movements*
   - Ensure the ability for freight to operate on industrial properties and to move through the City.
   - Address sight line clearances, especially at driveways and intersections.

3. *Be responsive to existing and potential uses*
   - Locate piers to maintain needed truck mobility along the corridor and at specific pier locations on industrial properties.
   - Locate piers to minimize impacts to visibility and access for business and uses along the corridor.
   - Balance parking needs with other competing uses, such as pedestrian space or landscaping.

B. Transit

1. *Design the guideway and system elements to support and, where possible, improve the visibility and viability of transit and intermodal connections.*
   - Locate system elements to make transit stops and connections to transit stops visible and convenient.
   - Maximize the potential of the guideway and system elements to support intermodal connections. For instance, the guideway could be designed to create weather-protected areas for transit stops or for pedestrian routes to transit stops.

C. Pedestrians

1. *Design the guideway and system elements to support and, where possible, improve the pedestrian environment.*
   - Ensure adequate space for pedestrians on sidewalks and pathways for current conditions and for likely future pedestrian movements.
   - Create a safe pedestrian environment, using the monorail system elements to improve pedestrian safety where possible. Provide consistent and predictable treatment of pedestrian crossings throughout the system to reinforce safe street crossing practices.
   - Make improvements to traffic signals and timing/phasing as needed, and add pedestrian safety devices at intersections where appropriate.
   - Ensure pedestrian access to building entrances, bus stop locations and bus shelters
   - Design the system elements creatively to enhance the pedestrian realm, for example, by creating protected or weather protected areas that serve as outdoor "rooms", or by using piers to protect pedestrians from traffic.

D. Bicycles

1. *Design the guideway and system elements to support and, where possible, improve the bicycle access.*
   - Ensure adequate space for bicycles on streets, bike lanes and pathways for current conditions and for likely future bicycle volumes.
   - Create a safe environment for cyclists, using the monorail system elements to improve safety where possible.
   - Make the most of any creative opportunities for the monorail corridor to contribute to dedicated bicycle lanes or paths.

III. Streetscape Design/Area Below the Guideway

A. Landscaping

1. *Use landscape elements generously throughout the Monorail corridor, integrating the guideway into its various contexts and recognizing that landscape design is critical to the Monorail's integration into its natural setting, its urban setting, and its success as a positive civic element for Seattle.*
   - Design landscaping that has an identity as part of the larger monorail corridor, but within that overall language responds to and enhances its context.
   - Maximize the planting potential of the available space, in accordance with City policy regarding tree selection and spacing; in other words, requiring trees wherever they can be planted without compromising function and safety along the corridor.
   - Provide low maintenance shrubs and/or groundcover along the corridor with emphasis on evergreen species or deciduous species with seasonal variation in leaf color and attractive branching habit to provide year round presence;
   - Plant landscape elements that are mature enough to integrate the guideway at the outset of the project (i.e. a minimum caliper tree).
   - Integrate with landscaping on adjacent private property, either existing or as required under development standards for future development.
   - Minimize the removal of existing significant trees and retain significant vegetation wherever possible, particularly where impacts are temporary such as removal of vegetation for construction staging. When distinctive or character-giving vegetation must be removed, it should be replaced with new plantings of a similar type and/or size as that removed.

2. *Utilize principles of sustainability in landscape design.*
   - Incorporate principles of sustainability into the landscape design and materials.
   - Consider native Northwest plants as a first choice to help create habitat and use drought tolerant plants as much as possible.

3. *Ensure long-term health and attractiveness of the landscape.*
   - Use landscape materials that are easily maintained, drought-tolerant, and can withstand local conditions, including an open corridor of primarily impermeable surfaces.
   - Provide supplemental water (by automatic or manual irrigation or by specific contract provisions for hand-watering) to ensure adequate care of newly installed material for a minimum of three (3) years after installation.

B. Public Art

1. *Incorporate an artistic approach or expression into the design of the guideway to fully take advantage of the opportunities for the guideway to assume a civic and sculptural form.*
   - In addition to the simple, elegant design of the guideway and system components, consider artistic expression in detailing, materials, lighting as appropriate. Especially consider art opportunities that can help reduce the scale of the system components in sensitive contexts.

2. *Incorporate art elements throughout the corridor that contribute to a larger sense of place and to the specific physical and cultural attributes of the context.*

C. Street Furniture and other Amenities

1. *Provide street furnishings along the corridor that are coordinated throughout the corridor, and appropriate to the needs of pedestrians within each corridor setting.*
   - Street furnishings are to be considered as part of the language of the guideway and system elements, coordinated as individual elements and compatible with the aesthetic of the system.
   - The system elements and street furnishings may be integrated, if appropriate, but should never appear to be added "afterthoughts" that detract from the simplicity and elegance of the system components.
   - Include seating, trash receptacles, street lights, paving materials, signage, landscaping as appropriate (some of these are also covered separately)

D. Spaces under the guideway

1. *Utilize the spaces under the guideway, where appropriate.*
   - In areas where pedestrians will be using the area under the guideway, design the space below the guideway as an attractive outdoor space, with attention given to the underside of the guideway, to maintainability, to personal safety, weather protection and an attractive pedestrian-scale character.

E. Lighting

1. *Utilize lighting along the corridor to create a safe environment, and where appropriate, to create a sense of place and for artistic expression.*
   - Design the lighting along the corridor to balance the system-wide character of lighting and the local conditions.
   - Take advantage of opportunities to add visual interest to the system elements through lighting, where appropriate, and incorporate lighting into the design vocabulary of the system.
   - Energy efficiency and sustainable principles are to be considered in the lighting design.
   - Use neighborhood goals to inform lighting differential – reinforcing gateways and protecting single-family residents from glare.
   - Take care to avoid glare for vehicles and for nearby businesses and residences, and use full cut-off light fixtures to reduce ambient light in night sky.
   - Limit accent lighting that creates ambient light to highly visible locations such as adjacent buildings of historic or architectural value.
   - Use Crime Prevention Through Environmental Design (CPTED) guidelines to establish visibility and lighting parameters.

F. Signage/Wayfinding

1. *Utilize the guideway and system elements as wayfinding elements.*
   - Take advantage of the visibility of the guideway to help people locate monorail and other transit stations.

2. *Incorporate additional signage and wayfinding for the monorail that is coordinated with other City signage systems.*
   - Coordinate all street and Monorail-related signage, and introduce interpretive signage or other wayfinding elements as desired.

- Provide sufficient signage and wayfinding so that people can locate public facilities and destinations along the corridor.

G. Utilities

1. *Coordinate the design of the vertical elements that will serve the corridor, including street lights, utility poles, and the piers.*
   - Where appropriate, have poles serve multiple uses in order to minimize visual clutter.
   - Take advantage of opportunities to incorporate sustainable water retention and storm drainage along the corridor.

Corridor Guidelines by Typology: Urban Core Corridor

Key Issues and Opportunities

- Careful integration of the monorail guideway and system elements into the fabric of the city's downtown
- Minimizing impacts to key streetscapes; open spaces and plazas; vistas/views; significant historic, civic, and cultural buildings; and overall character
- Maximizing the potential for the Monorail to play a significant role in creating an integrated transportation network/system with transit, light rail, and commuter trains
- Adding another dimension to the streetscape and overall street activity through pedestrian circulation at and above the street level, while not diminishing existing street level activity

Guideway and Related Elements

Guideway:

- The guideway and system element design must be compatible with the fine-grained scale of the urban fabric, paying careful attention to the quality of the pedestrian area and minimizing impacts on the existing streetscapes and buildings.
- Design system components with crisp, clean edges, containing mechanical and electrical systems within these forms to the extent possible.
- Consider reveals or shadow lines to lessen the perceived mass or depth of the guideway structure.
- Attention to detail, quality of materials and craftsmanship need to be of the highest caliber appropriate to Seattle's urban core.

Pier Design and Location:

- Create a legible rhythm of piers that relates to the grid of the blocks and streets.
- Locate piers to support the "zoning" of the pedestrian area into merchant zone, pedestrian through-route and an amenity zone at the street.

Switches and Other System Elements:

- Minimize the location of switches and other system elements in the urban core.
- When it is necessary to locate switches and other system elements in the urban core, use design to integrate elements into the urban fabric, providing screening where appropriate.

Access and Circulation Near the Guideway

- The pedestrian environment is critical to a vibrant downtown. The guideway and its components must be located so that adequate space is available for pedestrians, especially near bus stops. Balance needs for parking, bicycle lanes, pedestrian space and vehicle space that best supports the health of the urban core.

Streetscape, Landscape and Area Under the Guideway

- Streetscape quality is critical to integration of the monorail into the urban core. A full range of amenities, coordinated with the design of the system components, are necessary to create a welcoming pedestrian environment.
- Street trees are key to integrating the guideway into the urban environment because they are of the same scale as the monorail system. Design the landscape to soften the piers and guideway in perspective view down the monorail streets in the city center.
- Design the landscape to read also at the intimate pedestrian scale to ensure the highest quality urban environment.

Corridor Guidelines by Typology: Transportation Corridor

Key Issues and Opportunities

- The Monorail runs along several major arterials that must accommodate high volumes of through-traffic. In some cases, these arterial corridors also function as business frontage and to some extent, pedestrian connections. The Monorail design in these segments can respond to the scale of moving vehicles, and to larger topographic landforms. At the same time, the design must be sensitive to the localized conditions in order to support existing businesses and other uses along the corridor.
- There is an opportunity with the design of the Monorail to better support a pedestrian environment along some arterials. In these instances, the system should take advantage of opportunities to buffer pedestrians from fast moving traffic, and the opportunity to add signature landscape and sustainable storm water management.

Guideway and Related Elements

Guideway:

- Consider the appearance of the guideway at the scale appropriate to drivers as well as pedestrians, and make the guideway a positive contributor to the character and identity of the corridor in its setting.
- Allow for visibility and access to auto-oriented uses, and consider future flexibility for likely development patterns.
- Use the guideway design to assist in the gradual transition from auto-oriented areas to a more pedestrian-scale environment.

Pier Design and Location:

- Where multiple driveways cross the sidewalk area, locate piers to allow flexibility for future development.
- Where appropriate, locate columns to buffer pedestrians from arterial traffic.

Switches:

- Design switches with the same level of care as other system elements, integrating them into the larger grouping of elements. Where appropriate, use their presence as an opportunity to create weather-protected space, especially at transit stops.

Other System Elements:

- Integrate system elements in auto-oriented contexts in a manner that allows continuation of existing uses, and is supportive of future development patterns set out in neighborhood plans.

Access and Circulation Near the Guideway

- The segments of the corridor that are dominated by regional transportation movement must not inhibit that function. However, in those portions of the segment that will, over time, become more of a mix of pedestrian zones near arterial traffic, the guideway offers the potential to buffer pedestrians from the arterials. To the extent possible, use the location and design of the guideway and other elements to support the future potential of pedestrian comfort and safety along arterials.

Streetscape, Landscape and Area Under the Guideway

Design streetscape elements to be legible from vehicles and to support the pedestrian environment as appropriate. Utilize larger scale elements such as landscape and lighting to read at a larger scale. Add a finer scale of streetscape elements to support developing pedestrian environments.

Corridor Guidelines by Typology: Industrial Corridor

Key Issues and Opportunities

- The priority in industrial segments is maintaining and supporting the health of existing industrial uses. The piers should not impact freight movement, and should withstand proximity to truck movements.
- The level of amenity need not be as high in industrial areas, but safety for pedestrians and vehicles is important. Pedestrian safety issues should be addressed as local conditions require.

Guideway and Related Elements

Guideway:

- System elements should be simple, easy to maintain, and should minimize impact on industrial activities.

Pier Design and Location:

- Minimize impact on functionality of industrial uses such as truck access, loading and movement near piers.
- Protect piers from vehicles, and vice versa.

Switches:

- Switches are appropriate uses in industrial segments, governed by the same regulations as other industrial uses.

Operations Centers:

- Operations centers may only be located in Industrial segments. These centers should be good neighbors to adjacent uses in terms of appearance, access, noise and lighting.

Other System Elements:

- Any system elements located in industrial areas should minimize impacts on industrial activities.

Access and Circulation Near the Guideway

- Freight mobility and flexibility for industrial uses on private property are the highest priority for access. The design and location of the system elements should support pedestrian safety, and pedestrian safety devices should be added as required in order to support the co-existence of pedestrians and industrial activities.

Streetscape, Landscape and Area Under the Guideway

- Where appropriate in industrial area, design streetscape elements to be legible from passing vehicles and to support the pedestrian environment as appropriate. Utilize larger scale elements such as landscape and lighting to read at a larger scale.

Corridor Guidelines by Typology: Neighborhood Corridor

Key Issues and Opportunities

- Careful integration of the monorail guideway and system elements into the scale and fabric of neighborhoods along the corridor
- Minimizing impacts to key streetscapes; neighborhood businesses and residences, open spaces and plazas; vistas/views; significant historic, civic, and cultural buildings; and overall character
- Maximizing the potential for the Monorail to play a significant role in creating an integrated transportation network/system with transit, light rail, and commuter trains
- Adding another dimension to the streetscape and overall street activity through pedestrian circulation

Guideway and Related Elements

Guideway:

- The guideway and system element design must be compatible with the fine-grained scale of the neighborhood fabric. Ensuring compatibility is critical to supporting the pedestrian scale of neighborhood centers and their primary retail streets. Consider reveals or shadow lines to lessen the perceived mass or depth of the guideway structure.
- Attention to detail, quality of materials and craftsmanship should be of a high caliber in keeping with existing development and supportive of the character of development envisioned in applicable neighborhood plans.

Pier Design and Location:

- Locate columns to support the "zoning" of the pedestrian area into merchant zone, pedestrian through-route and an amenity zone at the street.

Switches:

- Make every effort to avoid locating switches in the neighborhood corridor.
- Where switches are necessary, design the switches to be integrated into the station and guideway as a whole. Consider using the switches to create weather-protected outdoor spaces, with finished surfaces the read as ceilings on the underside of the switch.

Other System Elements:

- Minimize the location of other system elements in the neighborhood corridor.
- When it is necessary to locate other system elements in the urban core, use design to integrate elements into the neighborhood fabric, providing screening where appropriate.

Access and Circulation Near the Guideway

- The pedestrian environment is critical to healthy neighborhood centers. The guideway and its components must be located so that adequate space is available for pedestrians, especially near bus stops. Balance needs for parking, bicycle lanes, pedestrian space and vehicle space that best supports the health of the neighborhood center.

Streetscape, Landscape and Area Under the Guideway

- Streetscape quality is critical to integration of the monorail into urban neighborhoods. A full range of amenities, coordinated with the design of the system components, are necessary to create a welcoming pedestrian environment.
- Street trees are key to integrating the guideway into the neighborhood corridor because they are of the same scale as the monorail system. Design the landscape to soften the piers and guideway in perspective view down the monorail streets in the neighborhood corridor.
- Design the landscape to read also at the intimate pedestrian scale to ensure the highest quality neighborhood environment.

Corridor Guidelines by Typology: Seattle Center

Key Issues and Opportunities

- Seattle's monorail originated with the design of the 1962 World's Fair. The design of the new guideway and system elements on the Seattle Center campus should reflect that optimistic spirit, with bright, clean, uplifting forms, elegantly integrating idealistic technology into everyday life.
- The International Fountain Mall is one of this region's most important outdoor spaces, and the quality of the design across the Mall is of critical importance to the character and function of the space.

Guideway and Related Elements

Guideway:

- As the new monorail passes through the Seattle Center campus, it should appear light and elegant with crisp forms silhouetted against the sky. The system elements should reflect the simple and graceful design and detailing of the Seattle Center's original architectural elements.
- As it passes through the International Fountain Mall, the curving linear form of the monorail should be disengaged from the rectilinear form of Mall, lifted above the buildings and allowed to fly free of

the grid on the ground. The monorail should appear as a graceful line above the landscape, in the sky. This disengagement can be achieved by lifting the alignment as high as possible above the ground, so that sky is visible below the monorail track in as many places as possible.

- The visual emphasis of the monorail guideway should be on the horizontal, but the monorail beam should be light and thin in appearance, utilizing changes in form or color to reduce the apparent depth of the beam.

Pier Design and Location:

- The piers that support the monorail should be slender, elegant, and simple in form, appearing to touch the ground lightly, with vertical articulation that further reduces their apparent width. Piers and guideway should be light in color.
- Great care should be taken in locating columns so as not to interrupt views into the International Fountain Mall from the Theater Commons, Founder's Court or the new outdoor space west of McCaw Hall. Important views can be framed or enhanced by column placement.
- The piers should be a background piece, essentially design neutral, able to fit with the variety of forms and site conditions to be encountered at Seattle Center. The shape of the piers should not create awkward relationships when adjacent to other objects.
- Optimize the trade-offs of the benefits of a higher guideway with the desire for slender piers.

Switches:

- Do not locate switches in any of the public open spaces of the Seattle Center campus. If switches are required in this segment, they must be located in service areas and designed so that the character of its context is not diminished.

Other System Elements:

- Minimize the location of other system elements on the Seattle Center campus.
- If other system elements are necessary on the Seattle Center grounds, locate them outside of pedestrian areas, and use landscape or other screening generously to preserve and enhance the campus.

Access and Circulation Near the Guideway

- The pedestrian environment is critical to a vibrant Seattle Center. The guideway and its components must be located so that adequate space is available for pedestrians, especially during events. The system must be located in order to allow required fire and emergency access on the grounds. Refer to the station area guidelines for access to and from the stations.

Streetscape, Landscape and Area Under the Guideway

- The Monorail will pass through a variety of contexts within the Seattle Center campus. The quality of the ground plane and landscape in the pedestrian areas of the campus is critical to the Seattle Center. Integrate the Monorail into the Seattle Center with generous landscaping and high quality materials, including paving.
- Save existing trees to the extent possible, and where removal is required, replacement is expected to be of similar size and quality.
- Consider the use of light, color and kinetic art to celebrate the movement of the monorail and mark important places along the route.

Corridor Guidelines by Typology: Bridges and Waterways

Key Issues and Opportunities

- The Monorail crosses the Ship Canal and the Duwamish River. These spans, and the transitions to and from the spans, should take advantage of design opportunities and view potential.
- The span across the Ship Canal has the potential to be a dramatic element linking Ballard and Interbay. The design direction of the bridge should be an artful reflection of the vision of the communities joined by the Monorail.

Guideway and Related Elements

Guideway:

- Transitions to and from bridges should be uniform in grade, alignment and form to result in a visually consistent and elegant structure.
- Make use of the potential drama of the bridge spans where appropriate.

Pier Design and Location:

- Design gradual transitions to and from the bridges with a legible rhythm of piers.

Access and Circulation Near the Guideway

- The location of the piers for the bridges and waterways should be located and designed to have the least possible impact on the adjacent vehicular and maritime uses.

Streetscape, Landscape and Area Under the Guideway

- Light, color and kinetic art can celebrate the movement of the monorail and mark important places along the route.
- Take care in designing areas of transition near the bridge, avoiding the creation of neglected spaces below the guideway.